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DEPARTMENT OF BIOCHEMISTRY

April 29, 1948

Dr. Joshua Lederberg
The University of Wisconsin
College of Agriculture
Department of Genetics
Madison 6, Wisconsin

Dear Joshua:

I should have written to you before not only to congratulate you upon the position you have but also to let you know the results we obtained in our experiments with p-fluoro phenylalanine.

After finding that this compound was relatively non-toxic, we fed it. We, however, were not able to do fluorine analysis on the proteins of the rat. I am still working on a micro fluorine method. To circumvent this difficulty, I prepared a deuterio p-fluoro phenylalanine. The deuterium was in the ring. On feeding this to rats there resulted a liver protein containing deuterium. On oxidation of the protein with chromic-sulfuric acids, the phenylalanine is oxidized to benzoic acid. Presumably the p-fluoro compound goes to p-fluorobenzoic acid. The benzoic acid fraction was isolated and contained all the deuterium originally present in the protein. This could be taken as proof that the p-fluoro phenylalanine was incorporated into the protein except that I now wonder if my starting material, p-fluoro toluene ~~were~~ was contaminated with toluene. If this were the case, my final deuterio fluoro phenylalanine would be contaminated with deuterio phenylalanine. I don't believe this was the case. I am now synthesizing p-fluoro toluene which will certainly be free of toluene. As soon as I obtain some fluoro phenylalanine, I shall send you some.

I shall send you the reprint you asked for,

Best regards,

D. Rittenberg